crystal are approximately parallel to an "a" axis and the normals to the reflecting surfaces of the C crystal are approximately parallel to the "c" axis. The normals to the reflecting surfaces of the H crystal are approximately 45° from the "c" axis and lie in a zone whose axis is an "a" axis.

The wave velocities and their pressure derivatives were measured by the ultrasonic pulse echo technique which is fully described in previous papers from this laboratory[11,12] The velocity measurements are related[4] to the elastic constants in a hexagonal crystal by the following equations.

$$
\begin{aligned}
C'_{11} &= (\rho v^2)_{11} - \left(\frac{(C'_{15})^2}{C'_{11} - C'_{55}} \right) \\
C'_{66} &= (\rho v^2)_{66} \\
C'_{55} &= (\rho v^2)_{55} + \left(\frac{(C'_{15})^2}{C'_{11} - C'_{55}} \right)
\end{aligned}
\qquad (1)
$$

The primed C's refer to a coordinate system which rotated with respect to the conventional coordinate system such that X' makes an angle θ with the "c" axis and is the direction of propagation and Y' lies in the basal plane. The term $(\rho v^2)_{11}$ refers to the longitudinal wave and the terms $(\rho v^2)_{66}$ and